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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/502,222	07/22/2004	Gianni Mirone	7587.226USWO	1893
23552 7590 04/27/2010 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903				
EXAMINER				
FLETCHER III, WILLIAM P				
ART UNIT		PAPER NUMBER		
1715				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/502,222

Applicant(s)

MIRONE ET AL.

Examiner

William P. Fletcher III

Art Unit

1715

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7-9, 11-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7, 14, 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8, 9, 11-13, 15, 16 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 26, 2008, has been entered.

Response to Amendment

2. Claims 1-5 and 7-24 are now pending.

Response to Arguments

3. Claims 1-3, 5, 8, 9, 11-13, 15, 16, and 24, as amended, remain rejected. It is the Examiner's position that the cited art reads on the claimed diluent as explained at paragraph 10D of the Office action mailed 7 October 2008.

Claim Rejections - 35 USC § 102

Claim Rejections - 35 USC § 103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-3, 5, 8, 9, 11-13, 15, 16, and 24, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Li (US 6,485,794 B1).

A. Claims 1 and 24

i. Li teaches the application of a single coating (i.e., paint) to a plastic container substrate. One preferred formulation of the coating material is exclusively UV-curable (satisfies new claim 24) [3:25-26]. The coating material includes up to about 99 wt.-% (inclusive of the claimed 30-60 wt.-%) of a film former that may be an "acrylic urethane" and/or a "urethane acrylate" copolymer [3:44-4:3]. The coating material further includes preferably about 0.5-5 wt.-% of a photoinitiator [4:59-5:28].

ii. The coating material also includes a wax dispersed in a solvent [4:4-42]. One example is carnauba wax emulsified in tripropylene glycol diacrylate. Li does not expressly state that at least a portion of the solvent evaporates at a temperature between 40-60°C. It is the Examiner's position that any liquid solvent, such as those listed by Li, at the liquid-air interface, exists in a state of equilibrium between liquid and vapor. In this sense, there is always some evaporation of some portion of the solvent, and this limitation of the claim is satisfied. Further, Li does not expressly state that the wax serves to orient the filler. It is the Examiner's position that the presence of the wax inherently serves to orient the filler since the molecules of wax and solvent define occupy a region in the coating that the filler cannot simultaneously occupy. As such, the wax serves to define where the filler may/may not be in the coating, thus reading on "orienting" the filler.

iii. Li further teaches the presence of a filler [6:38 ff.]. While this reference does not expressly teach the presence of leveling additives, it is the Examiner's position that the filler and other disclosed compounds [5:30 ff.] such as viscosity modifiers, solvents, surfactants, and coating aids, serve to influence the leveling properties by affecting the flow characteristics of the coating, such as viscosity, and read on the claimed "leveling additives." In the alternative, leveling additives are known in the

art and would have been obvious additives to give desired coating characteristics such as flow and surface coverage.

iv. Li teaches that the film former may be a blend of urethanes, acrylics, epoxies, and melamines [3:44-46]. Such a disclosure readily envisions a composition including, in addition to the urethane acrylate copolymer, additional acrylic resin. Since such an acrylic resin will necessarily be reactive with the other acrylic and urethane components of the composition, it may be considered to satisfy the limitation requiring a monomeric reactive diluent. Further, the disclosed additional compounds such as polyester acrylate may be considered as having two types of functional groups, ester and acrylic, thereby satisfying the limitations requiring multi-/bi-functional reactive diluents.

B. Claim 2

i. Li discloses aromatic urethane acrylate [3:61].

C. Claim 3

i. Insofar as a urethane acrylate includes both urethane and acrylic functional groups, it may be considered as satisfying the limitations of this claim.

D. Claim 5

i. Li teaches that the film former may be a blend of urethanes, acrylics, epoxies, and melamines [3:44-46].

ii. Such a disclosure readily envisions a composition including, in addition to the urethane acrylate copolymer, additional acrylic resin. Since such an acrylic resin will necessarily be reactive with the other acrylic and urethane components of the composition, it may be considered to satisfy the limitation requiring a monomeric reactive diluent.

iii. Further, the disclosed additional compounds such as polyester acrylate may be considered as having two types of functional groups, ester and acrylic, thereby satisfying the limitations requiring multi-/bi-functional reactive diluents.

E. Claims 8 and 9

i. As noted above, Li teaches thixotropic agents. These agents may also be considered anti-settling agents as they serve to thicken the composition, decreasing the flowability thereof, and inherently serving to make the settling of components due to gravity more difficult.

ii. The thixotropic agents are silica-based [6:26 ff.].

F. Claim 15

i. Li teaches the presence of at least one photoinitiator, from which can readily be envisioned two photoinitiators, thereby anticipating the limitations of this claim.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 6,485,794 B1), as applied to claim 9 above, further in view of Kimpel et al. (US 6,508,922 B2) and Shiraga et al. (US 5,378,275 A).

A. While Li teaches that the silica-based filler may be treated silica [6:40], this reference does not specify the claimed oxide-coated mica filler.

B. Kimpel teaches that it is known to incorporate as a pigment/filler, into a coating composition, coated mica [4:1 ff.]. Shiraga teaches that a known example of coated mica that may be added to a coating composition is mica coated with titanium dioxide or iron oxide [2:46 ff.].

C. Since Li does not specify the type of treated silica that may be used, one of ordinary skill in the art would have looked to the prior art for suitable examples of such a compound. The combined teaching of Kimpel and Shiraga would have suggested to one skilled in the art the use of titania- or iron oxide-coated mica. One skilled in the art would have been motivated to do so by the desire and expectation of successfully altering the viscosity of the composition.

9. Claims 12, 13, and 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 6,485,794 B1).

A. Claims 12 & 13

i. Li teaches that the coating composition may additionally contain colorants.

- ii. It is the Examiner's position that pigments are well-known in the coating art as a means of providing color to a resinous coating and would have been readily obvious to one skilled in the art.
- iii. With specific respect to claim 13, Li teaches that the composition may additionally contain an epoxy-acrylate resin in addition to the other acrylate monomers [acrylated bisphenol-A epoxy resins, 3:55 ff.], which, with pigment added thereto, reads on the claimed base.

B. Claim 16

- i. As noted above, Li teaches the presence of two photoinitiators.
- ii. While the two claimed photoinitiators are not expressly taught, it is clear that any known photoinitiators can advantageously be used in the curing of the composition. Consequently, the limitations of this claim are obvious.

Allowable Subject Matter

- 10. Claims 7, 14, 22, and 23 are allowed.
- 11. The following is an examiner's statement of reasons for allowance: The reasons remain the same as set forth under this heading in the prior Office action.
- 12. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Sunday, 5:00 AM - 12:00 PM and Monday through Friday, 5:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Phillip Fletcher III/
Primary Examiner, Art Unit 1715